

APT-002

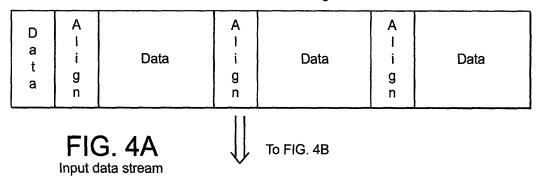
Serial

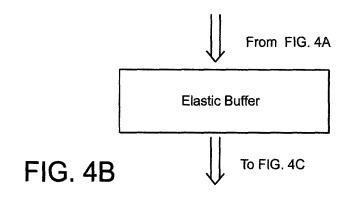
Serial No.: 09/903,147

ELASTIC SERIAL BUFFER TO COMPENSATE FOR DIFFERENT TRANSMIT AND RECEIVE LOCK RATES FOR ANY SERIAL PROTOCOL

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APT Elastic Buffer Manager





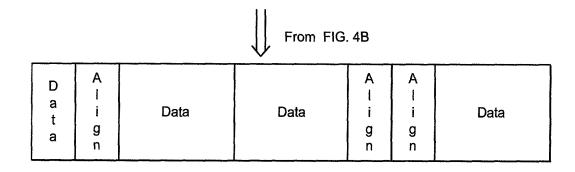


FIG. 4C Output data stream

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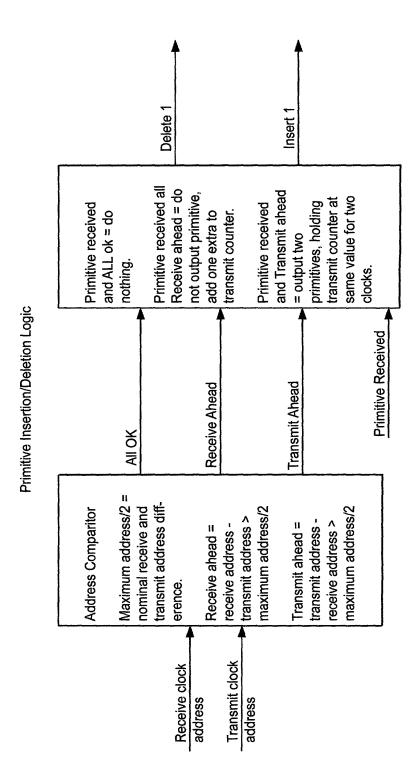
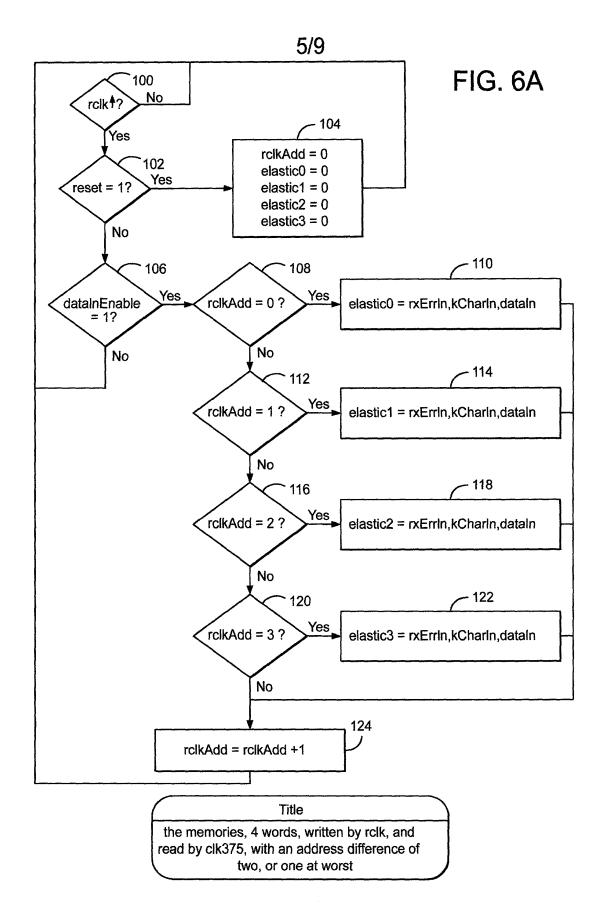


FIG. 5

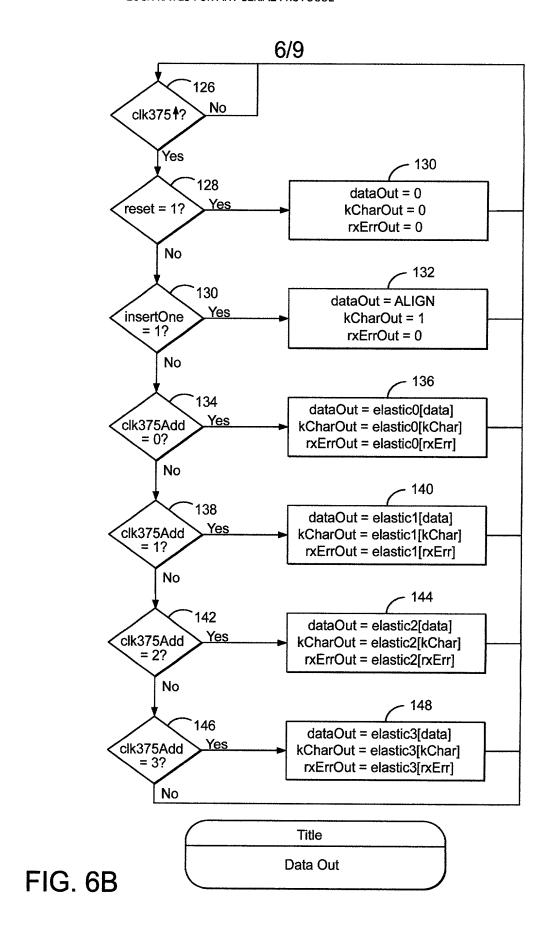
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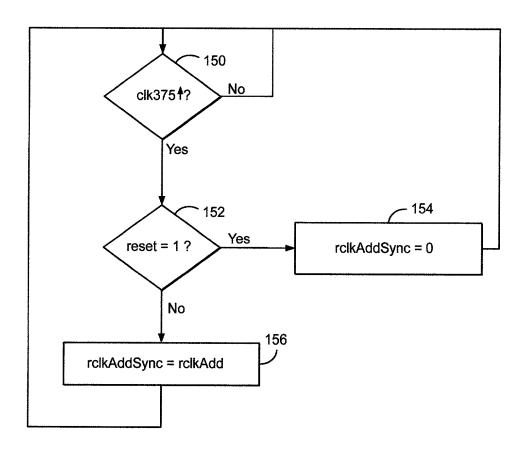


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Title
Synchronizer

FIG. 6C

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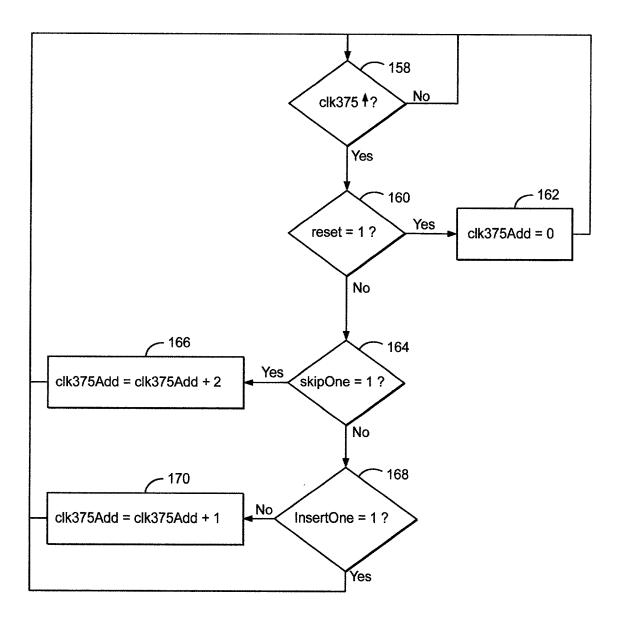
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Title The Two Counters

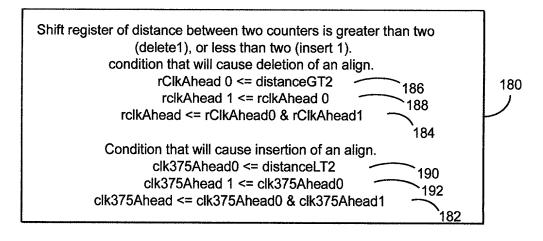
FIG. 6D

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Distance Calculation:

distance = rclkAddSync - clk375Add
distanceGT2 = (distance > 2)
distance LT2 = (distance < 2)

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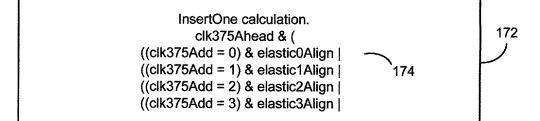
Constant comparison of 4 data words to align character. Keeps track of when an align is at the data out. Insertion or deletion will happen at this time.

Output signals:

elastic0Align = elastic0 == ALIGN elastic1Align = elastic1 == ALIGN

elastic2Align = elastic2 == ALIGN

elastic3Align = elastic3 == ALIGN



Title

Insert/delete comparisions

FIG. 7